

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—  
LOS ANGELES REGION  
101 CENTRE PLAZA DRIVE  
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SITE ASSESSMENT - MONADNOCK FACILITY, CITY OF INDUSTRY (FILE NO. 86-68; CAO NO. 88-057)

Your report, received November 2, 1990, which described the first phase of subsurface assessment at the subject site, has been reviewed. It provides support and direction for a second phase of assessment. This second phase is necessary because many of the specific locations investigated to date have exhibited vadose zone contamination. The next phase should be sufficiently detailed to establish the lateral and vertical extent of contaminants with respect to gas and absorbed/dissolved phases. The following comments pertain to specific results:

1. Sewer Line from Clarifier to Street - This line exhibited numerous "hits" at various probe points, including significantly elevated soil gas at some close-in segments of the system. Probe locations were not specifically targeted at joints or breaks in the line. The four additional probe points proposed are not sufficient to develop a pattern for remediation decisions. Provide an adequate array at multiple depths based on sewer line design. Present a large scale plan. Confirmation samples should include metals and cyanide, since the single soil sample at C-4 is not sufficient.
2. Clarifier - Low levels of 1,1,1-trichloroethane (TCA), trichloroethene (TCE) and tetrachloroethene (PCE) were measured in soil gas from two shallow probes near the clarifier. In addition, cadmium (Cd) and cyanide (CN) were reported. These results confirm waste discharge to ground at the clarifier since both Cd and CN were reported in the sludge from the clarifier. The low VOC values may be a result of "soil washing" by continuing discharge, masking because of the shallow investigation (2-3 feet bgs), or from locally saturated conditions. Soil moisture effects could not be

evaluated since logs were not supplied with the report. A multilevel survey must be performed on a grid basis at the clarifier and along the inlet/outlet lines. Confirmation borings must be performed to establish vertical extent of Cd and CN contamination.

3. Former Degreaser/Floor Drains - This area revealed significantly elevated VOCs. Your consultant recommends further investigation and staff concurs. However, the amount of work suggested is not sufficient. A survey, at multiple levels and on a grid basis must be developed, not merely 3 or 4 additional samples as proposed. The distribution of gas phase VOC contaminants in the vadose zone should be utilized to determine confirmation sampling locations. Physical samples must be obtained, specific tests performed and strippability evaluated, if a vapor extraction system is visualized as the chief means for cleaning underneath the building proper. It is suggested that some of the probes be permanently installed, since these would be required to monitor and validate any ultimate cleanup.
4. Well MW-3 - The analytical results verify that TCA, PCE and TCE occur in the vadose zone near MW-3. The source for both vapor and anomalously elevated ground water values at MW-3 may be the nearby industrial sewer line. Several corollaries are derive from this postulate: (a) confirmation of the source via soil gas array, (b) assessment of threat to ground water from both continued leakage and from any residual vapor phase, (c) remediation of the sewer line, (d) evaluation of the extension to the main Los Angeles County Sanitation Districts line.
5. Heat Treatment Area - The single soil sample demonstrated the occurrence of waste discharge to ground at the Heat treat sump since CN was reported at 7.3 mg/kg. The extent of discharge must be evaluated and preventive measures proposed to eliminate further discharge.
6. Plating/Rinsing Tank Sump - Analysis of a single sample revealed no metals or VOC problems.
7. Waste Water Treatment Area - CN was encountered in soils underlying the area. Further characterization is required and preventive measures must be proposed.
8. Paved Area South of the Building (Concrete/Asphalt Interface) - This area was revealed to have relatively high VOC concentration. It is necessary to define the source area and to determine how much threat is presented.

9. "Former Swamp" Areas - Preliminary survey indicates significant VOC concentrations in both areas. The lateral and vertical extent of soil contamination must be determined.
10. East Parking Lot Area - Waste discharge was confirmed in this area. Although at low levels, this implies a connection between VOC surface staining representing past waste discharge. Further work is required. In addition to more soil gas work, the stained asphalt should be directly sampled. If VOCs are present it may be necessary to include the asphalt in an overall remediation plan.
11. Southeast Corner of Building Area - Significant concentrations of VOCs were reported from this area. An additional soil gas work is needed to determine the lateral and vertical extent of contamination.
12. Former Chemical Storage Areas - Some five separate areas were included under this category. Although the report concludes that these areas have not been affected by VOCs, staff interprets these initial results differently.
  - (a) Bermed Area along the East Wall of the Building - Previous Petrex results indicated presence of aromatic and halogenated compounds at the outlet drain and the adjoining asphalt surface was stained and degraded. A single soil gas probe was emplaced within the bermed areas. Two probes, approximately 10 and 20 feet away, showed respectively 30 and 3477 ug/l of PCE. This remarkable lateral variation must be explained. An accurate complete picture of VOC contaminants along the east part of the building needs to be developed. Aromatic compounds are to be included in the analysis at these points.
  - (b) West Side of Building (Dock Storage to Southwest Corner) - VP-17, VP-19 and VP-15 were used to broadly characterize this area. A Single Petrex tube had been previously emplaced near VP-15. Whether or not the analytical result represent migration from other areas or not is moot since this area is between the high levels at the former vapor degreasers and VP-16 (between the remediated and capped area and MW-7). The comprehensive soil gas monitoring required on the other two areas should be extended to more fully assess this area.
  - (c) West Dock Storage Area (Paving /Dock Interface) - VP-32 and VP-33 were installed to evaluate previous assessment

results from a Petrex tube installed by staff. Although low levels of contamination were measured at VP-32 and VP-33, VP-34, the bare soil to the south exhibited values three orders of magnitude greater. Since this location intercepts surface water flow from the east parking lot, further soil gas work is appropriate to assure that no soil source has developed.

- (d) Pavement Line South and East of Building - VP-34 is along this so-called line. Probes were installed along it to verify that surface run-off, previous barrel storage or illicit disposal had not affected the area. Sufficient contamination was encountered to warrant more detailed evaluation.
  - (e) Heat Treating/ Former Laboratory Area - A single probe, VP-2, was emplaced near a heat treating tank and none in the adjacent laboratory. Analytical results included 832 ug/L of TCA and 5187 ug/L of PCE. This is very significant and further work must be performed to verify the source and extent of the problem. Note that CN had been encountered in companion soil samples.
13. Former Underground Storage Tank - Two soil gas probes were installed in the vicinity of the former underground gasoline tank. Although soil gas was analyzed and reported at an order of magnitude, none of the aromatic compounds (BTXE), commonly associated with gasoline, were indicated as analytes. Soil gas investigation at this location must be amplified to evaluate source(s) for the VOCs and to provide limited screening of the BTXE compounds.
14. Some data deficiencies need to be rectified. Certain conclusions from this investigation were problematic:
- (a) CKY analyzed most samples, such as C12, without providing adequate QA/QC documentation. Although a surrogate recovery and matrix spike and spike duplicate were provided for C12, the spikes were performed at 50 mg/kg while samples were required to be analyzed at ug/kg levels. All appropriate QA/QC must be submitted or the soil analytical results will not be acceptable. Explanation must be provided for some of the QA/QC which has been provided.
  - (b) All survey areas must be plotted on appropriately scaled maps. These may be subsets of a smaller scaled map, such as presented in the report, but sufficient site specific details must be provided. Although this report is viewed

as a reconnaissance, future work will depend on relevant site data being included.

- (c) The proposed clarifier inspection has been addressed in the report. Staff believes that a more extensive investigation of leakage from this device is necessary in addition to the inspection.
- (d) TRW suggests that a meeting is necessary before a workplan is prepared for additional phase(s). Staff has no objections to such a meeting. A draft workplan, based on the comments contained herein, would be a useful basis for such a meeting. Similarly it is suggested that a comprehensive large scale map be prepared so that decisions may focus on specifics of additional soil gas work. This additional work cannot be treated in term of a probe here and there but must be an integration of probe points at several depths.

Four copies of a final workplan for the next plan of investigation at Monadnock are due to the Regional Board by April 29, 1991. If you have any question, please contact Philip Chandler at (213) 266-7537.



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